

AR27

HONEYWELL INC. | ANNUAL REPORT 1967

AR27

HONEYWELL INC.

QUARTERLY REPORT

EYWELL
INC.

JUNE 30, 1968

TO OUR SHAREHOLDERS

SALES in the second quarter continued to rise rapidly and set a record for the period. Worldwide sales and rental income amounted to \$308.1 million compared to \$260.1 million for the like quarter in 1967, a gain of 18 per cent.

Earnings of \$10.6 million or 71¢ per share compare with \$9.7 million or 65¢ per share in the second quarter of 1967, an increase of 9 per cent and a record for the quarter.

The second quarter results brought Honeywell's six month sales to \$594.5 million as compared with \$488.8 million in the same 1967 period. The increase resulted largely from sales in the U.S. market. Earnings in this year's first six months totaled \$19.6 million or \$1.32 a share as against \$15.8 million or \$1.06 per share in the first half a year ago. Profit figures for the first half year reflect provision for the recently enacted 10 per cent Federal income surtax.

We are optimistic about the prospects for the second half of the year, but earnings compared with last year may not show as large a percentage increase as occurred in the first half.

Sales of controls for both the residential and larger building markets were above last year's second quarter in spite of the higher cost and shortage of mortgage funds.

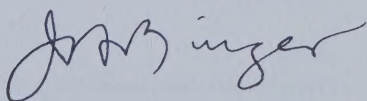
Sales of industrial automation systems and

controls have been stable and we expect a continuation of a relatively flat trend for the short-term future.

Our aerospace and defense business continues to run substantially ahead of a year ago. Federal budget cuts will result in a reduction in spending for certain programs that could influence our business to some modest extent.

Our computer business continues to be highly successful. Incoming orders are strong, influenced by a number of newly announced products that have been well received. We expect continued rapid growth and rising profitability in this area of the business.

A method of financing the leasing of computers, sale and leaseback, produced 15¢ per share in earnings in the second quarter of 1967 and 28¢ per share for the half. Since it was discontinued midway in 1967 it will not be involved in future quarterly comparisons of earnings.

A handwritten signature in dark ink, appearing to read "John B. Inger". The signature is fluid and cursive, with the first name "John" being more prominent and the last name "Inger" following in a similar style.

Chairman of the Board

HONEYWELL INC.

(Dollars in Thousands)

STATEMENT OF CONSOLIDATED INCOME

Sales and other income:

Sales, service and rental income

Other income (net)

Total

Cost of goods sold and other expenses*:

Cost of goods sold

Selling, general and administrative expenses

Interest

Total

Income before income taxes

Provision for income taxes

Net income

Earnings per share of common stock (based on
average number of shares outstanding)

*Includes depreciation and amortization

Average number of shares of common stock
outstanding

NOTE:

- (1) Net income for the second quarter of 1967 and the six months ended June 30, 1967, includes \$2,217,000 (15¢ per share) and \$4,057,000 (28¢ per share),

Three Months Ended June 30		Six Months Ended June 30	
<u>1968</u>	<u>1967</u>	<u>1968</u>	<u>1967</u>
308,122	\$260,145	\$594,507	\$488,837
<u>2,410</u>	<u>1,390</u>	<u>5,645</u>	<u>2,736</u>
<u>310,532</u>	<u>261,535</u>	<u>600,152</u>	<u>491,573</u>
221,933	183,942	429,921	345,655
59,700	53,524	116,515	104,804
<u>4,321</u>	<u>3,921</u>	<u>8,653</u>	<u>8,042</u>
<u>285,954</u>	<u>241,387</u>	<u>555,089</u>	<u>458,501</u>
24,578	20,148	45,063	33,072
<u>14,018</u>	<u>10,458</u>	<u>25,452</u>	<u>17,244</u>
<u>10,560</u>	<u>\$ 9,690</u>	<u>\$ 19,611</u>	<u>\$ 15,828</u>
.71	\$.65	\$ 1.32	\$ 1.06
15,747	\$ 13,069	\$ 30,860	\$ 26,611
		14,593,180	14,537,511

respectively, attributable to the sale and leaseback of computer equipment.

Minneapolis, Minnesota, July 16, 1968

Keytape Family Expanded As Sales Exceed Expectations

Twenty-eight models have been added to Honeywell's present eight-member Keytape family of keyboard-to-magnetic tape computer data preparation devices.

Keytape units eliminate the need to punch data into cards. The machines can increase data preparation production an average of 35 per cent over keypunch machines and boost data input to a computer system by 300 to 1,000 per cent.

Keytape units were introduced in late January to broaden Honeywell's total service to the computer market place. The current order volume is beyond the company's initial expectations.

The new Keytape models include a communications control capability that makes it possible for any Keytape operator to be in direct communication with a remote Series 200 computer and send Keytape-prepared data directly to the computer for processing.

Deliveries of the new models are scheduled to begin in the second quarter of 1969. Most of the new Keytape models will be built at the newly established San Diego, Calif. headquarters of EDP Data Products and Services operation.

An announcement was made in May that Data Products and Services would move from Boston to San Diego to accommodate the rapid growth of the unit which manufactures mass data-storage disk packs in addition to Keytape machines, and markets consumable supplies. The activity will occupy a plant in San Diego that has been a manufacturing facility for Test Instruments Division.

Construction has begun on a 50,000-square-foot addition to the San Diego plant where employment is expected to more than double from the present 280 to about 600 within a year.



Increase In R & D Spending Announced

At the annual meeting in Minneapolis on April 30, the company disclosed that it will increase research and development expenditures by 8 per cent in 1968.

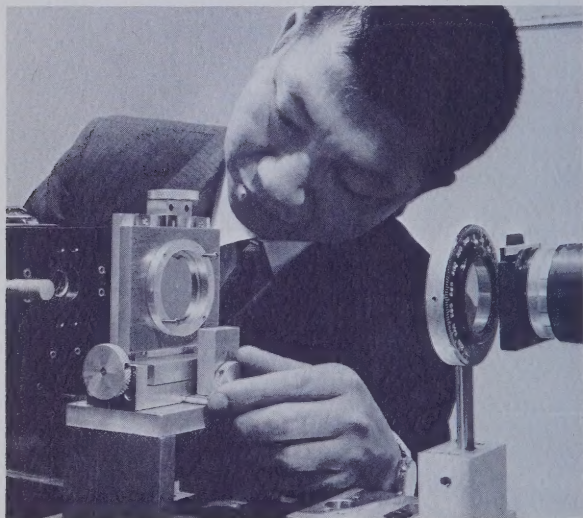
Dr. John N. Dempsey, vice president—science and engineering, attributed the increase to an “accelerating push into the advanced technology of computers, communications and control”.

He said R & D expenditures will total \$124 million, consisting of \$63 million in company-funded

work and another \$61 million in government-supported research.

Dempsey discussed the company's "very substantial program directed toward faster, smaller and less expensive computer memories. Research is under way to develop a kind of memory in which both reading and writing are done with a laser beam. If successful, it will feature extremely simple construction and near-ultimate bit density," he reported.

In other action at the annual meeting all of the company's directors were re-elected.



Laser computer memory under development

Honeywell Awarded \$1.6 Million Instrument Contract

Honeywell has been awarded a \$1.6 million contract to supply and install automatic controls for a new alumina processing plant under construction on the Caribbean island of Jamaica.

The single-source contract is one of the largest of its kind ever awarded a U.S. instrumentation manufacturer. The plant will be owned and operated jointly by Kaiser Jamaica, Anaconda Jamaica and Reynolds Jamaica Alumina Ltd.

Controls for the plant will be mostly electrical, including about 500 vertical scale indicator-controllers and trend recorders, 600 alarm units, and more than 500 transmitters of various types.

Plant Expansion Plans Announced

Honeywell plant expansion is occurring in Illinois, Florida, California, Colorado, Canada and Germany.

In the fall construction will begin on a 278,000-square-foot office and factory in Arlington Heights near Chicago to house the Chicago-based assembly operations of the Commercial Division.

Construction has begun on an 80,000-square-foot addition to the complex of buildings in St. Petersburg, Fla., in connection with the company's growing involvement in the communications field.

Photographic Products Division, which has shared a facility in Denver with the Test Instruments Division, has acquired its own 70,000-square-foot building in nearby Littleton. It will be occupied initially by production and service.

Computer-related expansion is taking place in San Diego (refer to Keytape story on Page 6), in Bowmanville, Ontario, where a 20,000-square-foot plant will be constructed to produce Keytape devices and in Heppenheim, Germany where a 60,000-square-foot computer factory is being built.

Important Contracts Received

Three highly significant contracts were received in the Aerospace and Defense area of the business in the past quarter.

Ordnance Division was awarded a \$25.7 million Navy contract for additional production of Mark 46 torpedoes, bringing to about \$225 million the total received for this work in the past three years.

Aerospace Division in Florida was awarded a \$3.3 million contract by the Navy's Special Projects Office for inertial guidance components for the Poseidon missile, and Aerospace Division in Minneapolis will build eight more Apollo spacecraft stabilization and control systems for North American Rockwell Corp. under a \$6.6-million agreement.



'Talking' Laser Developed For Space Use

Honeywell laser scientists have developed a deep-space laser communications system so sensitive it could pick up a voice signal from Mars.

It is an experimental system powerful enough to transmit or receive messages over 50 million miles, built for ground tests next month by the National Aeronautics and Space Administration.

Scientists at the Honeywell Systems and Research Center in Minneapolis used carbon dioxide gas in place of conventional helium-neon or argon gas to obtain the properties that will be necessary to permit interplanetary communications by laser in the 1970's.

The Honeywell device can detect a signal as faint as one ten-trillionth of a watt. It has been transmitting clear voice messages in the laboratory since mid-February.

The development was introduced to the technical community at the International Quantum Electronics Conference in Miami in May.

Redemption Call Issued For Preferred Stock

A call has been announced for redemption on August 1 of all outstanding shares of Honeywell 3% convertible preference stock.

The stock will be redeemed at \$100.134 per share or can be converted into 1-1/9 shares of common stock through July 29.

The company anticipates that most shares of the preference stock will be converted prior to the redemption date. The effect of conversions on present earnings per share of common stock will be negligible.

The stock was issued in April, 1961, and there were 215,698 shares outstanding on June 28 of this year.

DIRECTORS

Harold W. Sweatt
Honorary Chairman

James H. Binger
Chairman

Stephen F. Keating
President

Charles L. Davis
Vice President

Bruce B. Dayton
*President,
Dayton Corporation*

Walter W. Finke
*President,
Dictaphone Corporation*

Paul S. Gerot
*Honorary Chairman,
The Pillsbury Company*

Neil J. McKinnon
*Chairman,
Canadian Imperial
Bank of Commerce*

Eugene J. McNeely
*Retired President,
American Telephone
& Telegraph Co.*

Donald W. Nyrop
*President,
Northwest Airlines, Inc.*

L. H. Schoenhofen
*President,
Container Corporation
of America*

Alfred M. Wilson
Executive Vice President

John J. Wilson
*Secretary of the Corporation,
Massachusetts Institute
of Technology*

Paul B. Wishart
*Chairman,
Finance Committee*

Honeywell Inc.,
2701 Fourth Avenue South,
Minneapolis, Minnesota 55408

H O N E Y W E L L
I N C.





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*In the Sphinx Observatory atop
Jungfrauoch Mountain, Switzerland
(11,332 ft.), a Honeywell scientific
computer processes solar data.*

FINANCIAL HIGHLIGHTS OF 1967

	1967	1966	1965
Sales, service and rental income	\$1,044,927,223	\$914,384,094	\$735,039,121
Income before income taxes	80,810,044	87,153,870	66,842,656
Provision for income taxes	38,540,000	41,874,000	28,607,000
Net income	42,270,044	45,279,870	38,235,656
Net income per share of common stock outstanding at end of year	\$2.85	\$3.07	\$2.59
Income before taxes as a percent of sales	7.7%	9.5%	9.1%
Net income as a percent of sales	4.0%	5.0%	5.2%
Dividends paid per share of common stock	\$1.10	\$1.10	\$1.10
Common shares outstanding at end of year	14,567,551	14,516,415	14,489,626
Additions to property, plant and equipment	\$102,683,696	\$ 88,376,166	\$ 83,214,434
Depreciation and amortization	60,010,549	48,061,381	38,666,163
Number of employees	69,248	64,148	56,747
Floor space used (sq. ft.)	13,730,000	12,349,000	11,242,000

WORLDWIDE SALES BY MAJOR PRODUCT LINES

The contribution to 1967 sales of each major product line on a worldwide basis is shown below compared with the two prior years:

	1967		1966		1965	
	Percent of Total		Percent of Total		Percent of Total	
(Dollars in millions)	Amount	Total	Amount	Total	Amount	Total
Automation Systems and Controls for Homes and Buildings	\$261	25%	\$255	28%	\$230	32%
Automation Systems and Controls for Industry	216	21	220	24	193	26
Aerospace and Defense	330	31	231	25	192	26
Computer Systems and Components	207	20	183	20	104	14
Other Products, including Photographic	31	3	25	3	16	2
TOTAL	\$1,045	100%	\$914	100%	\$735	100%

February 23, 1968

Sales in 1967 exceeded one billion dollars for the first time, a milestone not as significant in today's broad-based economy as in the past, but a milestone that nonetheless calls attention to our growing importance as a contributor to the automating of industry and commerce worldwide.

The one billion dollar sales mark was passed by doubling the size of the company in approximately six years. Honeywell's activities are in growing markets, and we have every expectation that this pattern will continue over-all, although inevitably there will be fluctuations in some areas of our business.

Of great consequence for our future was the fact that our computer business was strong in 1967, continuing to demonstrate our ability to compete and expand in the most important new industry of the post World War II period.

The segment of our business that grew most rapidly in 1967 was, as anticipated, aerospace and defense. Sales in industrial markets and in the homes and buildings market were at about the same levels as the year before.

Sales outside the United States were \$212 million or 20 per cent of total volume. Devaluation of the British pound and certain other currencies had no material effect upon 1967 operations. The mandatory investment restrictions recently imposed by our government increase our cash requirements outside the United States which were already large and growing. To provide for these needs we issued, in February, additional long-term convertible debentures in the Euro-dollar market totalling \$30,000,000.

Quarterly performance in 1967 against the year before showed improvement in the last half, after adjustment for discontinuance of computer sale and leaseback transactions. As previously announced, there were no computer sale leaseback transactions in the last half of 1967 against \$20 million in that period a year ago.

To take the place of sale and leaseback of computers we formed a wholly-owned finance company to buy installment receivables and future rentals from the EDP Division as necessary. This method of financing our computer operations permits us to obtain the full financial benefits inherent in the long-term lease nature of the computer business.

At the year end our worldwide employment was 69,248 compared with 64,148 at the end of 1966. Salaries and

wages totalled \$480 million, up 10 per cent over the previous year. We continue to actively seek out, hire and train persons disadvantaged by race or background. Many Honeywellers serve on boards and agencies working to alleviate the present urban crisis. S. F. Keating has become first Chairman of the Urban Coalition in Minneapolis.

At the Annual Meeting in April stockholders approved the adoption of the Honeywell Employee Stock Option Plan. When the plan began operation on July 3, approximately 15,000 or 28.5 per cent of eligible employees in the United States and Canada had enrolled for participation in the plan. Based upon present estimates, it is expected that approximately 280,000 shares of the company's Common Stock would be required for issuance to those presently enrolled when the first option period ends on June 30, 1969.

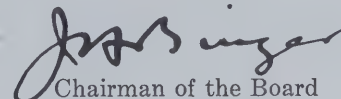
Prospects for the year ahead are for modest increases in the potential for controls in the home and building and industrial markets and for a continuing high level of demand for aerospace and defense products and for further expansion in the computer systems and components market.

As we enter 1968, there is no sign that the inflationary pressures evident since 1965 in the United States will be any less forceful. Costs have risen rapidly in that period and apparently will continue to do so at a rate greater than productivity. Similar effects are being felt in other countries.

Inflation influences our business in two ways. It has made it necessary for us to raise prices selectively. The other effect is a push for improved productivity that creates demand for automation products of the type we manufacture.

In general we expect continued profitable sales growth for the company, but in an atmosphere of troubled economic and political conditions.

For the Board of Directors


Chairman of the Board


President



A long list of computer input applications is included in the fast-growing market for this new keyboard assembly developed by the MICRO SWITCH Division. In the background is an enlarged display of its intricate circuitry.

1967 FINANCIAL REVIEW

Sales of products and services totaled \$1,044,927,223 in 1967, a 14% increase over the previous high of \$914,384,094 in 1966. Earnings of \$42,270,044 were off 7% from last year.

In comparing sales and earnings in both years, it is important to take into account the fact that 1966 sales included \$40 million of sale and leaseback of computers whereas 1967 sales included only \$20 million of sale and leaseback. The effect on earnings, as previously reported, was an increase from this source in 1966 of \$8,059,000 or 55¢ per share compared to \$4,057,000 or 28¢ per share in 1967. The company does not plan to sell and leaseback computers domestically in the foreseeable future. However balance of payment pressures may make sale and leaseback transactions advisable on a much smaller scale in foreign countries.

Dividend payments amounted to \$748,451 on the 3% convertible preference stock and \$16,002,916 on the common stock. Dividends of 27½¢ were paid on the common stock each quarter for a total of \$1.10 per share.

Provision for income taxes amounted to \$38,540,000 equal to \$2.65 per share. This compared with \$41,874,000 or \$2.88 per share in 1966.

Earnings retained in the business totaled \$25,518,677. This, together with \$60,010,549 provided for depreciation and amortization, made \$85,529,226 available for corporate requirements, including replacement of equipment.

During the year the company invested \$102,683,696 in plant expansion, tooling and equipment including EDP equipment for rental to customers.

In March last year the company issued \$60 million of 5.60% debentures due March 1, 1992. The company purchased and retired \$4,420,000 of long-term debt to meet 1968 sinking fund requirements.

Last year the company requested the holders of the company's 3.10% debentures due 1972 and the 3¾% debentures due 1976 to cooperate in amending the in-

dentures underlying these debentures. The purpose of amending these two older indentures was to bring them in line with the provisions of our more recent debenture issues. These amendments will permit the company greater flexibility in financing, particularly for its expanding computer operations. In consideration of the debenture holders' consents to these amendments (which were approved by more than two-thirds of the holders of each issue) the rate of interest of the 3.10% issue was increased to 3.35% per annum and the rate of the 3¾% issue was increased to 4% per annum.

One of the methods of financing computer operations made possible by the above indenture changes was the formation of a wholly-owned, nonconsolidated finance company — Honeywell Finance Inc. The initial company investment in this subsidiary was \$15,000,000, half in a subordinated loan and half in common stock. A \$60,000,000 line of bank credit was established of which \$23,350,000 was being utilized at year end. The finance company buys from the parent company installment receivables and portions of future rentals arising out of computer transactions. This method will re-

place the sale and leaseback method of financing which was discontinued in mid-year, and, unlike sale and leaseback, it will have little or no effect on earnings. The balance sheet of the finance company as of December 31, 1967 is included in the Notes to the Financial Statements.

Bank loans decreased from \$91,830,000 at the end of 1966 to \$41,363,000 at the end of 1967. The bank loans outstanding at the end of 1967 were all outside the United States. In addition all the \$31,628,000 of time deposits shown at year end were outside the United States and were available for foreign needs. Because of the uncertainty resulting from the recent mandatory balance of payments restrictions, a wholly-owned subsidiary of the company has issued \$30 million 5% debentures due 1983, offered outside the United States. These debentures are guaranteed by the company and are convertible into shares of the company's common stock at \$103.25 per share. This issue will further insure the availability of funds for the further expansion of our operations outside the United States.

A summary of the source and application of funds as they affect working capital follows:

SOURCE OF FUNDS

	1967	1966	1965
Net income	\$ 42,270,044	\$ 45,279,870	\$ 38,235,656
Depreciation and amortization	60,010,549	48,061,381	38,666,163
Income taxes deferred—net	4,293,000	2,765,000	2,576,000
Deferred rental income	29,317,197	—	—
Subtotal	135,890,790	96,106,251	79,477,819
Long-term borrowings	64,209,000	28,644,000	49,812,500
Total	200,099,790	124,750,251	129,290,319

APPLICATION OF FUNDS

Expenditures for plant and equipment	102,683,696	88,376,166	83,214,434
Retirement of long-term debt	4,420,000	3,152,000	3,146,000
Dividends paid	16,751,367	16,593,948	16,223,304
Investment in Honeywell Finance Inc.	15,065,853	—	—
Other	(60,250)	2,539,116	7,195
Total	138,860,666	110,661,230	102,590,933
Net increase in working capital during the year	\$ 61,239,124	\$ 14,089,021	\$ 26,699,386

CONSOLIDATED BALANCE SHEET*Honeywell Inc. and Subsidiaries/December 31, 1967 and 1966*

ASSETS	1967	1966
Current Assets		
Cash.....	\$ 17,210,942	\$ 20,476,611
Time deposits.....	31,628,000	31,217,000
Trade receivables (less allowance for doubtful accounts, 1967, \$1,494,000; 1966, \$1,306,000).....	182,598,568	181,156,723
Sundry receivables.....	8,574,861	7,264,500
Inventories — at lower of cost, on a first-in, first-out basis, or market (less progress billings on uncompleted contracts, 1967, \$55,532,846; 1966, \$24,673,936).....	233,707,460	220,704,126
Total current assets.....	473,719,831	460,818,960
Investments in and advances to Honeywell Finance Inc. —At equity in net assets.....	15,065,853	
Property, Plant and Equipment (including equipment for lease to customers)—At cost less accumulated depreciation and amor- tization, 1967, \$162,094,562; 1966, \$129,782,030.....	332,507,441	289,025,294
Trademarks and Goodwill	8,846,107	8,846,107
Deferred Charges and Other Assets	17,163,473	13,364,384
Total	\$847,302,705	\$772,054,745

See accompanying Notes to Financial Statements (Pages 15-16).

LIABILITIES

	<u>1967</u>	<u>1966</u>
Current Liabilities		
Accounts payable.....	\$ 61,890,493	\$ 60,120,970
Notes payable.....	41,363,000	91,830,000
Accrued liabilities other than income taxes.....	41,812,794	31,633,316
Income taxes.....	<u>30,162,755</u>	<u>39,983,009</u>
Total current liabilities.....	<u>175,229,042</u>	<u>223,567,295</u>
Long-Term Debt	<u>221,475,000</u>	<u>161,095,000</u>
Deferred Income Taxes	<u>35,109,000</u>	<u>30,007,000</u>
Deferred Rental Income	<u>29,317,197</u>	
Reserve Applicable to Foreign Operations	<u>1,361,860</u>	<u>1,361,860</u>
Stockholders' Equity		
Preference stock—(authorized, 750,000 shares of \$100 par value each; outstanding, 1967, 247,536 shares; 1966, 250,000 shares of 3% convertible).....	24,753,600	25,000,000
Common stock—\$1.50 par value each (authorized 20,000,000 shares; outstanding, 1967, 14,567,551 shares; 1966, 14,516,415 shares).....	21,851,327	21,774,623
Additional paid-in capital.....	78,618,211	75,180,176
Retained earnings (1967, \$48,070,445 unrestricted under long-term debt agreements).....	<u>259,587,468</u>	<u>234,068,791</u>
Total stockholders' equity.....	<u>384,810,606</u>	<u>356,023,590</u>
Total.....	<u>\$847,302,705</u>	<u>\$772,054,745</u>

SUMMARY OF CONSOLIDATED INCOME

Honeywell Inc. and Subsidiaries / For The Years Ended December 31, 1967 and 1966

Sales and Other Income	1967	1966
Sales, service and rental income.....	\$1,044,927,223	\$914,384,094
Other income (less miscellaneous income charges).....	8,564,175	3,454,461
Total.....	1,053,491,398	917,838,555
 Cost of Goods Sold and Other Expenses including depreciation and amortization—1967, \$60,010,549; 1966, \$48,061,381		
Cost of goods sold :	741,151,268	625,585,236
Selling, general and administrative expenses.....	215,863,567	193,789,596
Interest.....	15,666,519	11,309,853
Total.....	972,681,354	830,684,685
 Income Before Income Taxes	80,810,044	87,153,870
Provision for Federal, State and Foreign Income Taxes	38,540,000	41,874,000
Net Income for the Year	\$ 42,270,044	\$ 45,279,870
 Net Income Per Share of Common Stock Outstanding at End of Year	\$2.85	\$3.07

See accompanying Notes to Financial Statements (Pages 15-16).

**SUMMARIES OF CONSOLIDATED RETAINED
EARNINGS AND ADDITIONAL PAID-IN CAPITAL**

Honeywell Inc. and Subsidiaries/For The Years Ended December 31, 1967 and 1966

Retained Earnings	1967	1966
Balance, January 1.....	\$234,068,791	\$205,382,869
Net income for the year.....	42,270,044	45,279,870
Total.....	276,338,835	250,662,739
Dividends		
Preference—3% convertible.....	748,451	750,000
Common—\$1.10 per share.....	16,002,916	15,843,948
Total.....	16,751,367	16,593,948
Balance, December 31.....	\$259,587,468	\$234,068,791
Additional Paid-in Capital		
Balance, January 1.....	\$ 75,180,176	\$ 73,880,191
Excess of the consideration received over the par value of common stock issued during the year.....	3,438,035	1,299,985
Balance, December 31.....	\$ 78,618,211	\$ 75,180,176

1943 - 1967 HONEYWELL RECORD OF OPERATIONS

YEAR	SALES (Millions)	PROVISION FOR INCOME TAXES (Millions)	NET INCOME (Millions)	NET INCOME PER COMMON SHARE	COMMON STOCK DIVIDEND PER SHARE	STOCK- HOLDERS' EQUITY (Millions)	NUMBER OF EMPLOYEES (At Year End)
1943	\$ 68.3	\$ 8.8	\$ 2.9	\$.27	\$.15 $\frac{5}{8}$	\$ 17.2	10,355
1948	57.6	3.8	5.9	.56	.31 $\frac{1}{4}$	34.9	8,584
1953	214.0	18.4	10.3	.82 $\frac{3}{4}$.56 $\frac{1}{4}$	70.3	24,241
1958	328.5	25.6	22.6	1.61	.87 $\frac{1}{2}$	170.2	32,129
1959	381.4	33.3	29.4	2.10	.92 $\frac{1}{2}$	187.2	36,216
1960	426.2	30.1	26.2	1.87	1.00	200.3	39,872
1961	470.2	27.3	24.9	1.74	1.00	235.6	45,076
1962	595.9	31.0	26.9	1.86	1.00	248.0	47,714
1963	648.5	37.8	34.7	2.41	1.00	268.0	48,585
1964	667.2	39.1	41.4	2.89	1.02 $\frac{1}{2}$	294.6	50,768
1965	735.0	28.6	38.2	2.59	1.10	326.0	56,747
1966	914.4	41.9	45.3	3.07	1.10	356.0	64,148
1967	1,044.9	38.5	42.3	2.85	1.10	384.8	69,248

NOTE: The above includes the Canadian subsidiary for all years; other foreign subsidiaries were included in consolidation in 1955 for the first time since 1939, Electro Instruments, Incorporated and Computer Control Company, Inc. from 1965. Per share data is adjusted to reflect stock splits in 1936, 1944, 1950, 1955 and 1964.

NOTES TO FINANCIAL STATEMENTS

1. Basis of Consolidation

The consolidated financial statements include the accounts of Honeywell Inc. and all significant wholly-owned subsidiaries, except Honeywell Finance Inc., a wholly-owned finance subsidiary, whose balance sheet follows:

HONEYWELL FINANCE INC.

BALANCE SHEET—December 31, 1967

Cash.....	\$ 1,417,333
Receivables (less allowance for losses, \$1,947,494).....	37,002,394
Other assets.....	73,139
TOTAL.....	\$ 38,492,866

Notes payable and other liabilities.....	\$ 23,427,013
Subordinated debt due Honeywell Inc.....	7,500,000
Stockholders' equity.....	7,565,853
TOTAL.....	\$ 38,492,866

2. Property, Plant and Equipment

	1967	1966
Land.....	\$ 7,765,945	\$ 7,457,299
Buildings and improvements.....	83,415,073	78,764,991
Machinery and equipment.....	158,564,672	140,156,095
Equipment for lease to customers.....	242,566,227	190,745,886
Construction in progress.....	2,290,086	1,683,053
	494,602,003	418,807,324
Less accumulated depreciation and amortization.....	162,094,562	129,782,030
Property, plant and equipment—net.....	\$332,507,441	\$289,025,294

3. Long-Term Debt

Honeywell Inc. Debentures	1967	1966
3.35% due 1969 to 1972.....	\$ 9,110,000	\$ 10,100,000
4% due 1969 to 1976.....	15,348,000	16,600,000
4½% due 1969 to 1986.....	22,187,000	23,125,000
4¾% due 1969 to 1988.....	28,875,000	30,000,000
5.60% due 1974 to 1992.....	60,000,000	
Notes		
5¾% due 1969 to 1978.....	1,155,000	1,270,000
4.55% due 1970 to 1990.....	50,000,000	50,000,000
Foreign Subsidiaries		
Bank loans due 1969 to 1971.....	4,800,000	
Notes 6¾% due 1971.....	15,000,000	15,000,000
Debentures 6% due 1969 to 1981.....	15,000,000	15,000,000
TOTAL.....	\$221,475,000	\$161,095,000

4. Convertible Preference Stock

The Convertible Preference Stock is convertible at any time, at the option of the holders, into Common Stock at a rate of 1-1/9 shares of Common Stock for each share of Convertible Preference Stock.

5. Stock Options

Under the Company's 1959 and 1964 stock option plans, options have been granted to officers and key employees of the Company and its subsidiaries to purchase Common Stock at 95% through April 30, 1964, and 100% thereafter, of the market value of the Common Stock at time of granting. There were outstanding at December 31, 1967 options covering 180,512 shares; 22,131 shares were issued during 1967 upon exercise of options; options on 3,508 shares were cancelled; and at December 31, 1967, there remained 48,800 shares available for granting of options.

Under the Company's employee stock option plan, options have been granted to eligible employees of the Company and certain wholly-owned subsidiaries to purchase Common Stock at the lower of 90% of the highest price of the Common Stock at time of granting or at the time options are exercised. At December 31, 1967 there are 500,000 shares reserved for this plan.

6. Accounting Practice

Leases to customers for computer systems are accounted for as operating leases, and the rentals under such leases are included in sales, service and rental income as earned over the term of the lease. Future rentals sold to Honeywell Finance Inc., as described in the financial review section of this report (page 9), have been credited to Deferred Rental Income and will be included in sales, service and rental income in accordance with the above method. In 1966 and 1967, computer systems under 5-year leases having a sales price of \$40 million and \$20 million, respectively, were sold to financial organizations. This equipment was leased back from the owners for sublease to our customers. Revenues from the sale of the equipment are included in sales, service and rental income for the years in which the sales were made.

7. Leased Property

Minimum annual rental costs under noncancelable leases amounted to approximately \$8,300,000 for leases outstanding at December 31, 1967 with initial lease periods ranging from three to twenty years. The Company also has substantial annual rental commitments arising from the lease-back of computer systems referred to in Note 6; however, those costs are covered by rental income under subleases with customers.

8. Pension and Retirement Plans

The Company provides pension plans for both salaried and hourly-rated employees, financed solely by Company contributions. Contributions, which are equivalent to the provisions for pension costs, are transferred to a trustee who disburses benefits earned under the terms of these plans from trust funds so accumulated. Pension cost for years 1966 and 1967, including amortization of prior-service costs on a thirty-year basis, was \$7,300,000 and \$11,100,000, respectively. The Company, under terms of the plans, may alter, suspend or discontinue the plans at any time.

During 1967, benefits provided by the plans were increased and the higher cost level of the revised plans applicable to

NOTES TO FINANCIAL STATEMENTS

the last six months of the year was charged against earnings. In addition, actuarial changes were made to provide for funding with respect to salaried employees from date of employment rather than after five years and attainment of age 30, and to provide for partial recognition of unrealized appreciation of trust fund equity investments in computing pension costs. Approximately two-thirds of the \$3,800,000 added costs was due to actuarial changes and increases in plan benefits.

All major subsidiaries of the Company provide pension plans for employees on terms consistent with practices in the country of operation. The cost of such plans approximated \$1,308,000 and \$1,806,000 in 1966 and 1967, respectively.

9. Renegotiation

The Company has substantial United States Government contracts and subcontracts, the profits on which are subject to renegotiation. Final settlements have been made for all years prior to 1967. The Company does not anticipate that any refunds will have to be made for 1967.

10. Litigation

During the year the Company became involved in litigation relative to a computer patent held by a subsidiary of Sperry Rand Corporation. While the Company's management believes that the issues involved are of great importance, we expect the matter will be resolved without a materially adverse effect on the Company.

HASKINS & SELLS

Certified Public Accountants

NORTHWESTERN BANK BUILDING • MINNEAPOLIS

To the Stockholders of Honeywell Inc.:

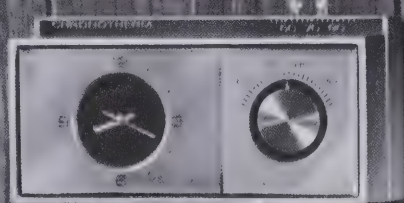
We have examined the consolidated balance sheet of Honeywell Inc. and consolidated subsidiaries as of December 31, 1967 and the related summaries of consolidated income, retained earnings and additional paid-in capital for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances; it was not practicable to confirm receivables from the United States Government, but we carried out other auditing procedures with respect to such receivables.

In our opinion, the accompanying financial statements present fairly the financial position of the companies at December 31, 1967 and the results of their operations for the year then ended, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

February 13, 1968

Haskins & Sells

OPERATIONS OF THE YEAR





"The 'Total Home Comfort' concept for residences and centralized environmental building control are trends that should contribute to our continued growth in the year ahead."

Edward C. Vorlander
Vice President
Temperature Controls Group

The combined results of a record-setting year for the Commercial Division and a slightly depressed year for the Residential Division resulted in worldwide sales of the Temperature Controls Group at approximately the same level as 1966—\$261 million as compared to \$255 million 1966.

Sales of automated systems and controls for buildings by our Commercial Division continued at a peak level throughout 1967, and backlogs for future work are at an all-time high.

Residential Division's sale of controls for the home was down somewhat during most of 1967 due to the very low rate of housing starts and expenditures for modernization in the last half of 1966 and early 1967. The increasing rate of housing starts through the second half of the year did not give appreciable impetus to our sales until November and December. If the existing housing start rate is maintained, improvement in business should result in 1968.

The concept of "total home comfort"—automatically controlled heating, air conditioning, humidifying and electronic air cleaning—continues to grow in consumer favor. Several new products will be introduced in 1968, the first of which is a new clock thermostat.

The new Honeywell clock thermostat, which automatically programs indoor temperatures on a twenty-four hour basis, has been completely redesigned to incorporate many of the desirable features that have become so popular in our "round" deluxe residential thermo-

The new Chronotherm clock thermostat is the most accurate residential clock thermostat ever produced. It automatically resets itself to increase day-night comfort, and save on fuel costs.

stat. The original "Chronotherm" clock thermostat was introduced by Honeywell in 1907, and major design improvements in the line were made in 1912, 1924, 1935, 1950 and 1960.

Together with an entirely new decorator design which reduced the size and improved the appearance of the clock thermostat, a number of technical changes were made that have substantially improved the reliability, performance, life expectancy and ease of installation of the new thermostat.

A new heating-cooling subbase for the clock thermostat was also introduced. The new subbase allows the clock thermostat to be used universally for heating, cooling or combination heating and cooling applications.

During 1967 considerable attention was paid to the research and development of new products for both the home and buildings temperature controls markets. This advanced planning was undertaken to assure a flow of fine quality devices over the coming years that will maintain Honeywell's leadership in this field.

Our electronic air cleaner sales continue to grow. This is in part due to heightened consumer awareness of the problems of air pollution. Another factor affecting this market is acceptance of our system by original equipment manufacturers for inclusion in their "Total Home Comfort" packaged systems. Sales of the electronic air cleaner should continue to grow and become increasingly profitable.

In 1967 the Residential Division further extended its successful TRADELINE wholesaler program by adding a number of standardized replacement and modernization controls to the line. Chief among the introductions to this line was the TRADELINE family of gas central heating and appliance controls. This new standardization package—unique in the industry—comprises thirteen components which are capable of replacing 538 Honeywell and competitive gas controls.

Although those major portions of the Residential Division's markets which are affected by housing starts were down for the year, other segments of the division's business recorded significant gains. Our penetration of the controls market for refrigeration and air conditioning equipment expanded further in 1967.

AUTOMATION AND CONTROLS FOR HOMES AND BUILDINGS

Another growth area during the past year was in the market in which Residential Division supplies manufacturers, wholesalers and contractors with electric controls that go into small buildings and commercial establishments.

In December, Residential Division introduced a new flame safeguard device, the ultra-violet sensing version of Honeywell's flame monitoring and control system. Our newly developed ultra-violet detector adds the benefits of smaller size, greater sensitivity and lower price to the existing family of flame safeguard controls now manufactured.

Our line of flame safeguard controls is the largest-selling line in the industry. The new UV sensor, which is designed to monitor the combustion of large gas or oil-fired burners for industrial and commercial applications, unlike existing detectors, effectively "reads" gas and oil flames, but does not sense other sources of light and heat which might cause inaccurate operation. The new ultra-violet sensor also operates under a far wider range of ambient temperatures than conventional devices.

Our Commercial Division, which specializes in the systems approach to environmental and security control for maximum efficiency in large buildings and building complexes, achieved record sales gains.

Several factors contributed to this growth and are expected to spur Commercial Division expansion in 1968. Two important factors are the increasing acceptance of the centralized environmental building monitoring and control concept and continuing expansion of this concept into the college and hospital markets; and the increased use of intrusion detection systems in commercial establishments.

Also important is the continued expansion of the market for ionization-type "products of combustion" detection systems to provide early fire warning. This system detects the presence of combustion products whether they are visible or not, and provides the earliest and most dependable method of fire warning.

Another favorable development is the rapid growth of electric heat, particularly in large buildings, due to aggressive promotion by electric utility companies.

The outlook is favorable despite increased competitive pressure and the fact that 1967 was characterized by rising costs and delayed construction schedules. We anticipated this trend and initiated a price increase in the latter part of 1966. Also, we concentrated on the more desirable contracts and exercised careful control

of construction costs.

A number of new products were introduced by the Commercial Division during the year, most significant of which were:

A new compressor air-drier. A source of dry, clean air is important for optimum performance of pneumatic control systems. A new principle is used in Honeywell's drier which offers higher quality air with less maintenance than previous systems.

New solid state current "valves" to control large electric heating loads. These devices, when combined with our modular solid state control equipment, give Honeywell the broadest line of solid state controls for electric heating in the industry.

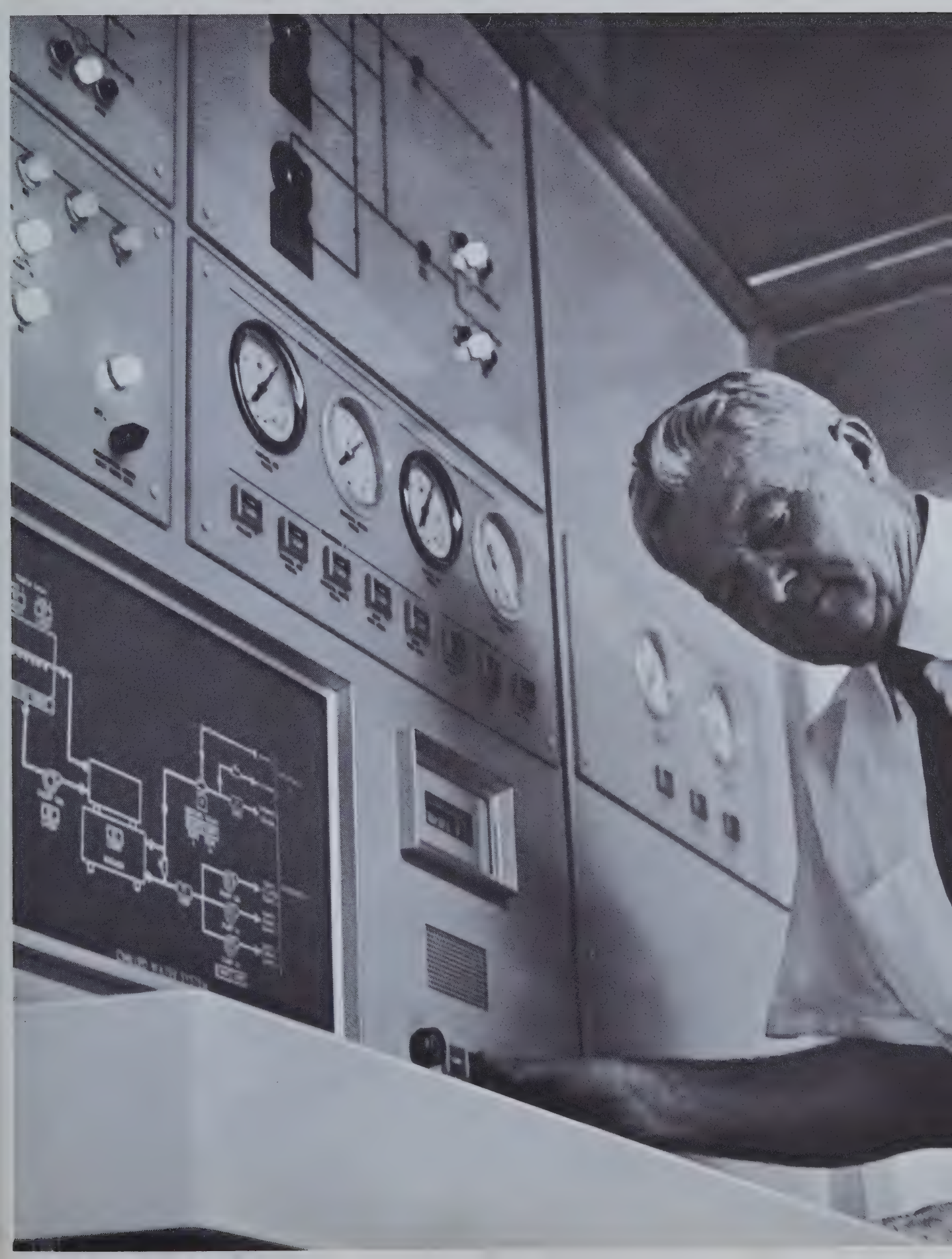
Among the many Commercial Division engineering and installation contracts executed during the year, several are unique.

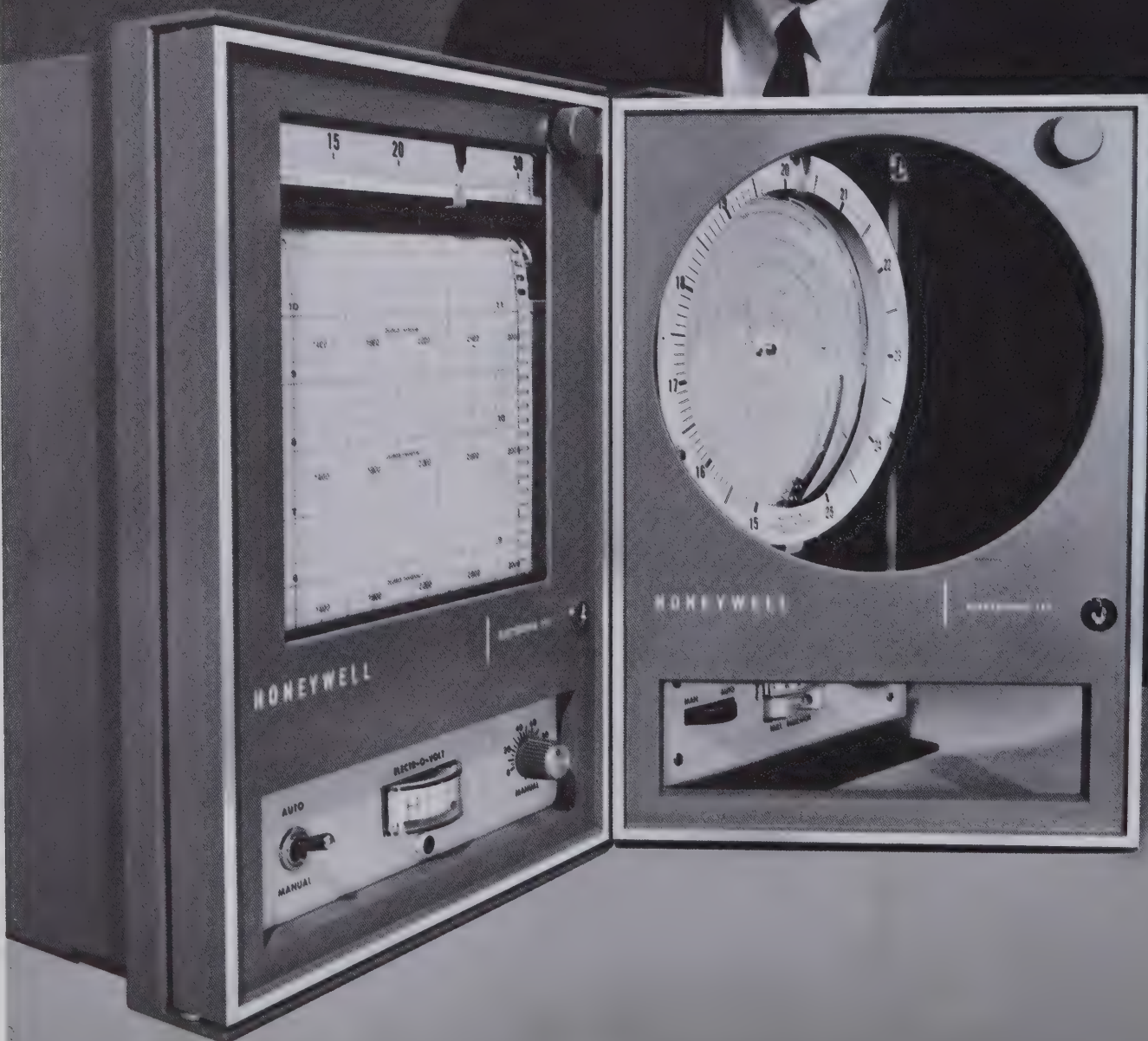
The new Hoffmann-La Roche Inc. general administrative and office building in Nutley, New Jersey, is equipped with more than five hundred Honeywell proportional solid state electric heat controllers which regulate the temperature in individual rooms. This is the largest installation of solid state controllers to date.

The new Houston Lighting and Power Company building, presently under construction, will have one of the most advanced centralized control systems in the world. This Honeywell system uses a digital computer to monitor and log hundreds of separate pieces of information relating to the operation of the building's environmental control system. Four printers automatically record off-normal information, operating data and changes made to the system by operating personnel. The system also provides computation of energy usage and efficiency.

Doctors Hospital, Columbus, Ohio, has a novel application of a Honeywell Selectographic building automation system for its new satellite unit, Doctors Hospital—West, located nine miles from the main building. A system of transmission is used to permit engineering personnel at the main hospital to start and stop air conditioning and other mechanical and electrical equipment, and monitor alarms at the satellite building. The same system is used to transmit closed-circuit television broadcasts for medical and surgical instruction.

This Honeywell DataCenter centralization system controls building mechanical equipment for the Del Webb hotel complex in Phoenix. Operating savings are estimated at \$20,000 per year.



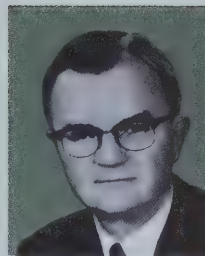




Clyde A. Parton
Vice President
Industrial Products Group

"To better serve our industrial market, we have accelerated our engineering programs and as a result will introduce more new instrumentation in 1968 than in any year in our history."

James S. Locke
Vice President
MICRO SWITCH Division



The industrial market, in which four divisions are engaged, was relatively flat in 1967. Moderate gains were registered in certain areas, but these were more than offset by reduced levels of capital spending in some industrial sectors.

Sales totaled \$216 million or 21 per cent of the company's business compared with \$220 million last year. Substantial progress was made by the Industrial Division in solving complex problems noted in last year's report. This permitted the division to concentrate engineering efforts on the development of new products.

As a result of this accelerated engineering program the division will market more new instrumentation in 1968 than in any year in its history.

Of significance is a new potentiometer, the ElectroniK 111. Half the size of conventional potentiometers, the instrument incorporates circuitry designed for higher reliability and accuracy. Another forward step was the addition of important options to the wide-chart ElectroniK 19 line of laboratory and test potentiometers.

This year's new products included a flange-mounted liquid level transmitter, a dissolved-oxygen sensor for activated sludge applications in industrial and municipal waste treatment plants, and a low-cost resistance thermometer-actuated instrument, called Servoline, for temperature measurement and control.

The Servoline is an example of the growing collabora-

This new Honeywell ElectroniK 111 Potentiometer features a smaller, more compact recording chart than previous models, and is available in all control modes including both electric and pneumatic.

tion in product engineering between our U.S. manufacturing centers and our subsidiaries overseas. Originally developed and marketed by our subsidiary in Great Britain, Honeywell Controls, Ltd., Servoline offers significant advantages in price and per-

formance. Another example of international engineering is the increasing acceptance in the United States of miniature electronic instrumentation, known as CurrentroniK, developed by our Japanese affiliate, Yamatake-Honeywell Co., Ltd.

Our contract instrumentation sales—the installation of control systems—increased to a record level. More and more companies are contracting for our specialized skills and services in systems design, installation, commissioning and maintenance. Of particular note during the year were projects completed or in progress for Allied Chemical Company, Union Carbide Corporation, Firestone Tire & Rubber Company, West Virginia Pulp and Paper Company, Amoco Chemical Company, Kraft Foods, General Motors Corporation, Kennecott Copper Corporation, and Jersey Central Power & Light Company.

Our position in the water pollution market as a supplier of sensors and systems for measuring and recording the quality characteristics of water continues strong. An unusual application was the installation of Honeywell water quality monitoring systems on two Clean Water Patrol boats operated by the Metropolitan St. Louis Sewer District on the Mississippi River. The electronic-equipped boats, the first of their kind, are being used in a joint pollution study with the Federal Water Pollution Control Administration. Other applications included systems for the Tennessee Valley Authority, Humble Oil & Refining Company and Enjay Chemical Company.

Another promising instrumentation market only now beginning to emerge is in air pollution control. To advance our interests and to gain first-hand knowledge of the problems involved, we plan to place in service in the County of Los Angeles a mobile analytical

CONTROLS FOR INDUSTRY

laboratory for determining the amount of organic solvents discharged into the air by manufacturing plants. The services of this laboratory will be made available on a fee basis to companies required to meet emission standards of Los Angeles County.

Sales of special-purpose analog computers continue to reflect the growing interest in this means of measurement, computation and control. One computer of note was developed for the U.S. Public Health Service's National Communicable Disease Center in Atlanta, Georgia. It calculates enzyme reaction rates of blood samples of thousands of patients.

The application of advanced digital techniques to industrial process control is being pursued with Honeywell's Computer Control Division.

Sales of precision electrical switches, manufactured by our MICRO SWITCH Division in Freeport, Illinois, continued at about the same level during 1967 as the previous year. This plateau is due to inventory buildup by customers in 1966 and resultant inventory liquidation in 1967.

The KB (keyboard) switching concept for communication and data entry systems for electronic data processing was expanded to a fully wired keyboard assembly which electronically translates English into computer language. Growth in this area of our business has been strong.

Military and aircraft business in switches showed a significant increase in 1967, due to both the Vietnam war and the continued growth of the commercial airline industry.

A new line of oil-tight pushbutton switches and controls for the industrial market was introduced in late summer. Acceptance of this new advanced styling has been exceptionally good.

Our Precision Meter sales have shown a moderate increase in 1967 over 1966 levels in a year when the total market decreased somewhat. Some gains were made in our share of the commercial panel meter market. Two new panel meter models were introduced to broaden our existing product lines.

The year was marked by consolidation of product lines and the development of marketing capabilities to accommodate new product areas for our Colorado-based Test Instruments Division, with manufacturing facilities in Denver, San Diego and Annapolis.

A continuing high level of defense expenditures for tactical weapons curtailed the government research and development programs which constitute a major market for test instruments.

Record sales of electronic medical systems and tape product lines stemmed from deeper market penetration and the wide acceptance of the versatile Model 7600 tape unit. Contracts for tape units were received in connection with several major defense programs. One such contract involves special digital tape recorders for the Navy's Poseidon missile program.

During the year we became the exclusive distributor in the western hemisphere of the Digitest multimeter, a low-cost French-built digital device expected to have strong impact in general testing and laboratory-related markets.

New products introduced in 1967 included the dual-purpose Visiprinter oscillograph, which permits recording of digital characters as well as an oscillographic record, a new microfilm recorder that provides customers with 35mm-type records of oscillographic data, electro-magnetic interference equipment and digital data measuring instruments.

The new Annapolis-based metrology service program made good gains.

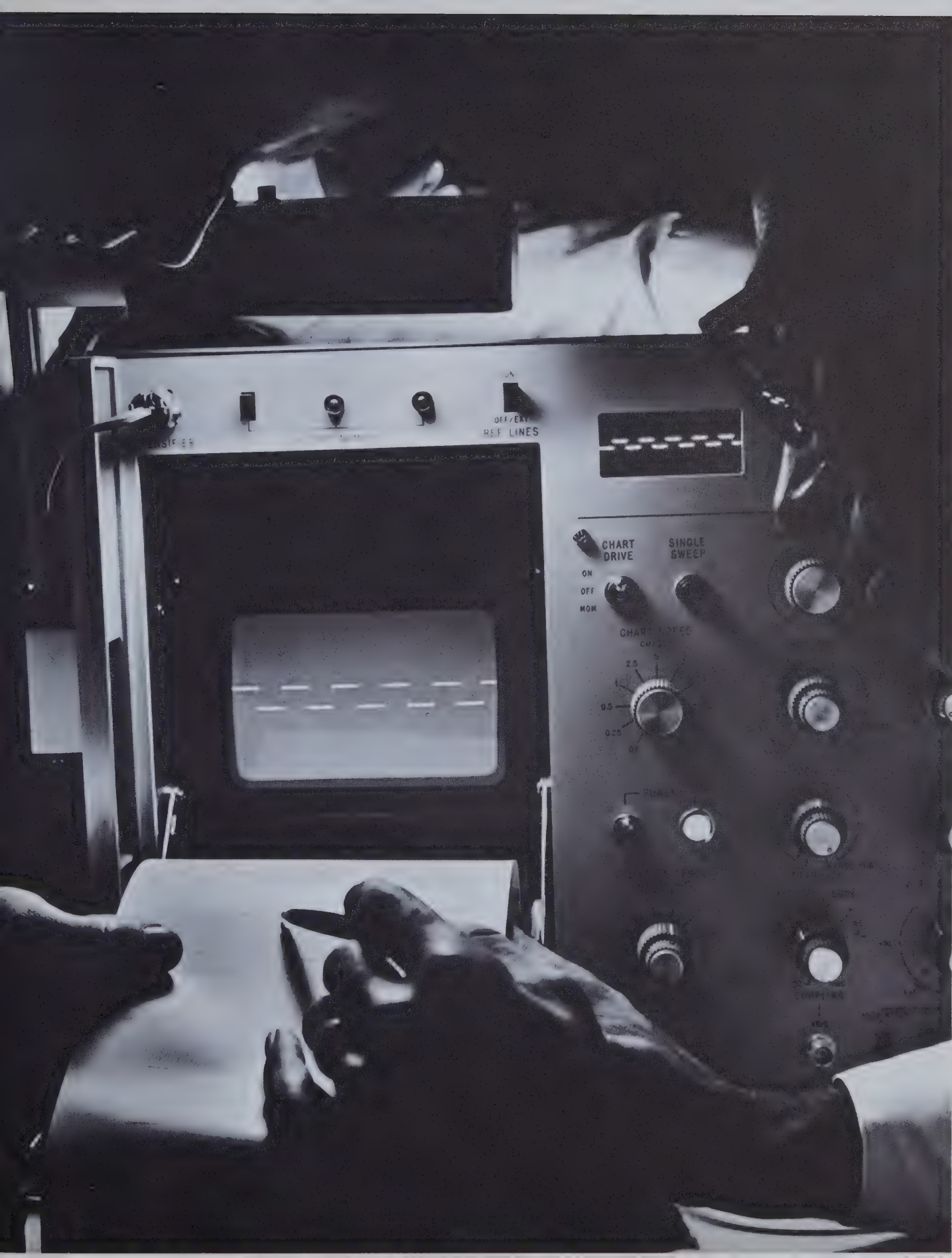
Apparatus Controls Division sales were somewhat below expectation in 1967 due to reduced capital spending in some of our prime industrial markets such as metal processing, textiles, chemicals, machinery and machine tools, food, petroleum, and agriculture.

This contraction, however, should be only temporary. Industry's continuing search for effective means to offset steadily spiraling costs puts the division—with its background in automation techniques—in an advantageous position.

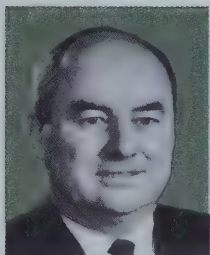
Apparatus Controls, supplying automatic equipment for the industrial market including machinery controls, was strengthened by new product introductions and expansion of its distributor sales force. New products included electronic temperature controls for the plastics and synthetic fiber industries, special controls for environmental chambers, and a low-cost indicating temperature controller.

This controller is another example of our company's worldwide engineering collaboration effort. The device was designed and manufactured by our subsidiary in Amiens, France. Its compact size and pricing make it attractive for the U.S. market.

Test Instruments Division's fiber-optics recording oscilloscope is used in research and aerospace work. It direct-records signals of up to one million cycles per second.







"In the aerospace and defense field, government demand for the types of products we make is up in total and we are advancing in rank among Department of Defense suppliers in both size and performance."

Charles L. Davis
Vice President
Aerospace & Defense Group

Our Aerospace & Defense business grew forty-two per cent in 1967 to \$330 million, compared with \$231 million the previous year.

This substantial increase is primarily in our ordnance operations, and results from the planned diversification into new air-delivered weapons for the Air Force, marine products for the Navy, and the production of the Mk46 antisubmarine torpedoes for the Navy.

Government demand for the types of products we make is up in total, and we are advancing in rank among Defense Department suppliers against strong competition. Estimates indicate that we are supplying five to seven per cent of this type of requirement.

The Group ended the year with the highest backlog ever. New orders during 1967 were sixty per cent higher than those obtained in 1966. Year-end backlog increased sixty-five percent over the beginning backlog for 1967. We expect a record sales volume in 1968.

In space the outlook is somewhat shaded by recent Congressional action on overall spending authorizations for the National Aeronautics and Space Administration (NASA). However, our space equipment market continues to be good since we are involved in all manned space programs and supply equipment to most of the unmanned space projects for both NASA and the Air Force.

As compared with an almost equally divided business in 1966, the group's sales for 1967 were somewhat unevenly distributed among the Air Force (38 per cent),

Helmet sight lets a helicopter pilot aim his guns simply by turning his head to the target. The sights are now in production for a new Army helicopter.

the Army (26 per cent), the Navy (21 per cent), and NASA (8 per cent). The percentages reflect the completion of our Apollo program and the build-up of the new air-delivered weapons sales. Commercial and international sales increased over 1966 and amounted to seven per cent.

Among the most significant achievements in 1967 were the strengthening of our position in antisubmarine warfare systems and our penetration of the communications equipment market. From the initial Mk46 anti-submarine torpedo production contract of \$10 million in 1966, the second contract for \$50 million was completed in 1967 and a third contract for \$98 million was obtained for 1968 production. This is a successful program which should continue at a high level through 1970.

Contracts were received for development of advanced communications equipment. Included were development of devices for voice digitization, signal modulation and demodulation, multiplexing, and other specialized equipment.

Ordnance Division continued its 1966 growth pattern. Continued depletion of weapon stockpiles in Southeast Asia hastened production of current munitions and conversion of several of our engineering development programs into full-scale production.

Ordnance Division planning indicates that cessation of hostilities in Southeast Asia will result in prompt reduction in military requirements for some of their high volume munition programs as the transition is made to procurement for stockpile-only objectives. Many Ordnance Division programs, now in their early production phases, will be required for stockpile purposes at that time. An expected rise in Air Force and Navy business for new systems will take place. The net effect, however, will be an early post-Vietnam dip in total volume before return to normal levels of business.

Conventional weapon programs promising steady growth potential in future years include the Navy's Rockeye munition/dispenser system and several aerially delivered mine/dispenser systems, which went into volume production during the year.

New ordnance research and development programs

were won including the Navy's 20-millimeter general purpose projectile and several Air Force-sponsored electronic fuzes. In general our engineering work was characterized by a continuing trend from mechanical to electronic design, and by a greatly increased test capability with the opening of our fully instrumented ordnance proving ground in Minnesota.

New emphasis was placed on ocean technology by reorganizing West Coast operations into a Marine Systems Center. The Center introduced several commercial systems for the control of offshore oil drilling, using advanced acoustic technology to accurately position drilling vessels.

Our work in the field of battery power sources advanced the technology, resulting in applications in communications, meteorology, space, security systems, and survival equipment. Commercial uses are being investigated.

Aerospace Division performed well on four major programs started in 1966. Initial deliveries were completed of the flight control system for the Air Force C-5A cargo transport aircraft and the flight control system for the Army's Advanced Aerial Fire Support System (AAFSS) helicopter. Prototype deliveries were also completed for the attitude control system and platform scan control system for the Mariner/Mars 1969 program. Development continued on the Air Force's Manned Orbiting Laboratory (MOL).

Aerospace engineers continued to develop and use new technologies including fluidic techniques for both sensors and control systems for aircraft, the application of laser and electrically suspended gyro (ESG) technology to sensors for control of navigation systems, and the continued emphasis on microminiaturized, integrated digital circuitry for application on a variety of future devices and systems.

We succeeded in the application of radar altimeters to a variety of military aircraft, including all Navy helicopters. Also resulting from new product emphasis was the application of the air data computer and engine pressure ratio system to commercial aircraft.

A Navy contract broadened our guidance and navigation base with a significant penetration into radio satellite navigation.

During the year a new aircraft navigation system employing our ESG performed extremely well on flight tests for the Air Force. Also, the feasibility of this ESG system to provide self-contained, worldwide, passive, precise navigation of ships was established.

Our military digital computer product position im-

proved with advancement of our plated wire memory work. We are currently among the leaders in this technology which promises to command a major portion of the severe-environment memory market.

Systems & Research Division continues to apply advanced technology to new products for all of our market interests. Significant contract programs being worked on are an advanced infrared mapping system, a helicopter real-time display, a tank-mounted infrared night vision system, and an airborne visual real-time target acquisition and reporting system. We continue to lead the industry in long wave length, infrared detection materials, and multi-element detector arrays.

The laser gyro development in 1966 was advanced by our research scientists. We obtained military contracts for a navigator-type laser gyro and began laboratory testing of small-size laser gyro units for missile autopilot applications.

A new fluidic high-temperature (up to 3,000° F.) sensor with fast response was developed and successfully tested in an X-15 aircraft.

The Systems & Research Division refined the electronic helmet head sight for use by aircraft pilots in gun aiming and reconnaissance. This is the only system on the market today that accomplishes pin-point accuracy without mechanical linkage attached to the pilot's head.

The Aerospace & Defense Group employment rose nearly 15 per cent during 1967 to a total of 19,300. We expanded our factories and laboratories 13 per cent with the addition of 430,000 sq. ft. All existing manufacturing facilities are at or near capacity for the various high-volume production programs.

The year 1967 for Aerospace & Defense reflects the fact that we met the demands placed on this large and significant segment of our business. We are operating with almost 4 million sq. ft. of floor space, which will be used to full capacity in 1968. We have continued to manage our investment with a very favorable ratio to sales and have held our long-term investment for the Southeast Asian requirements to a minimum. We are entering the year 1968 with a large, well-balanced backlog position and a strong organization which is expected to bring about continued improved operating results.

The Ocean Twin, an 81-foot catamaran especially outfitted for underwater research work, is the fourth and largest vessel operated by Honeywell's Seattle Development Laboratory. It was placed in service last year.





COMPUTER OPERATIONS



Clarence W. Spangle
Vice President
EDP Division

"By adding more than 100 hardware and software products and product modifications in the past year we are prepared to expand the computer markets now being served and to enter other growing markets."

Benjamin Kessel
Vice President
Computer Control Division



Honeywell's computer operations continued rapid growth in 1967. By year's end nearly 3500 Honeywell-designed computers were installed or on order around the world, and cumulative volume of operating and ordered equipment passed the billion dollar mark in the third quarter.

Sales and rental revenue of the Computer Group amounted to \$207 million, compared with \$183 million in 1966.

Illustrative of our growth pattern is the Computer Group's installation record. It required ten years for Honeywell to install its first thousand computers, and just one year to install the second thousand, a level we reached in May, 1967.

Expansion of all our computer markets should continue in 1968.

Product lines of the Electronic Data Processing and Computer Control Divisions are being broadened continuously to assure competitiveness. In 1967, for example, more than a hundred hardware and software products and product modifications were added to the Series 200 EDP line and the control computer line.

Among the most significant product additions were the Model 125 and 1250, introduced in September, which added a low-cost random access system and a proficient real-time processor to the EDP Division's Series 200 family.

New Keytape device bypasses conventional punched-card computer data preparation by transcribing information directly onto magnetic tape from the keyboard. Operator tasks are similar to those on a keypunch machine.

markets now being served, and to enter other growing markets. For example, at EDP a Special Products department was formed to manufacture and sell consumable supplies — such as magnetic tape, punched cards and other accessories.

Late in the year we began manufacturing and delivering magnetic disk packs, making the company the third firm in the industry to have this capability. Disk packs, used in third-generation computer systems to enhance direct-access multi-programming applications, are being used in continuously greater quantities by the industry. Honeywell's disk packs will be marketed to users of Series 200 computers and competitive equipment.

We also developed a Keytape product line. The completely new devices are aimed at eliminating the industry's "data entry bottleneck" by making it possible to transcribe raw data directly onto magnetic tape. As replacements for conventional keypunch and verifier machines, the Keytape units are expected to find a sizeable market by the end of 1968.

A new computer was put into production and announced in January, 1968. It is the Model 110, ninth and smallest central processor in the Series 200 product family. With the Model 110 we now are able to satisfy user needs ranging from small systems in the \$2,000-a-month rental range up through the large-scale Model 8200, which leases for more than \$50,000-a-month.

All central processors in the product line—which also includes the Models 120, 125, 200, 1200, 1250, 2200 and 4200—are completely compatible, making it possible for a user to begin with the smallest Series 200 system and grow through the line into the largest system without changing programming.

COMPUTER OPERATIONS

Long-term computer leasing, successfully pioneered by Honeywell in 1965, continued to be the principal form of rental agreement. Nearly seventy per cent of commercial Series 200 contracts signed in 1967 were for five-year periods.

With nearly twenty per cent of its existing customers using one or more types of data communications systems, Honeywell is a leader in applying communications products and concepts to information processing. Among the 1967 new products mentioned above, twenty-two are communications-oriented, reflecting the high level of our efforts in this emerging market.

Also evident is an increasing commitment to random access storage systems and multiprogramming techniques. In this area we added thirty new hardware and software items to the line, including five models of disk drives and disk files.

Until recently our main markets were manufacturing, distribution, insurance and transportation, but several important new markets are emerging. The most rapidly-growing is the hospital/medical field, where our volume tripled in the past year. Another market becoming important to us is banking.

In the Computer Control Division continued growth in products, facilities and personnel marked 1967 as a year of expansion. The DDP-516 computer, introduced late in 1966, has already booked more orders than any previous division computer.

The small computer market, currently estimated at about ten per cent of the total computer market, is expected to grow at a faster pace than the overall market for the foreseeable future. Its continued expansion at 20-25 per cent a year will provide even greater opportunities for the division in 1968.

Major computer customers in 1967 included Conduction—Missouri, Gerber Scientific, Photon, Inc., and Stromberg-Carlson Corporation, who used division computers in commercial flight simulators, plotter control, phototypesetting, and magnetic tape-to-micro-film transfer systems.

Significant growth areas for the division's DDP line included digital communications and control of display and other output devices. The demand for control computers continued strong among government agencies, especially the National Aeronautics and Space Administration and the Navy.

Overseas shipments for our newly-formed Computer Operations, Europe, more than doubled last year.

Larger than anticipated requirements for DDP-516 and DDP-416 computers led us to increase production rates, which were doubled by year end.

The division worked closely with other Honeywell divisions throughout the year exploring new markets which are expected to be significant factors in 1968. As an example Honeywell engineers from coast to coast will be linked to a special computer system installed at Minneapolis next year. Two DDP-516 computers and a DDP-416 form the system which will solve engineering problems from remote terminal devices located at Honeywell plants from Seattle to Boston.

The primary responsibility for the development of computer based process control systems was assigned to Computer Control Division in 1966. Working in coordination with the Industrial Division, CCD is furthering Honeywell's investment and experience in this field by applying the newest integrated circuit computers and techniques.

Both the EDP and CCD organizations intensified application of micro-electronic circuitry in existing products in 1967. Five of the nine Series 200 processors—Models 110, 120, 125, 4200 and 8200—are making heavy use of integrated circuits, the most advanced form of micro-electronics, and all of CCD's latest machines are now using IC technology throughout.

Facilities expansion was brisk during 1967. In October the EDP Division opened its 110th sales office, which serves New York's Wall Street area. Two months later it dedicated a 106,000 square-foot addition to its EDP Technology Center in Waltham, Massachusetts. The new wing, will house the division's programming systems organization and a \$15 million computer center.

Significant expansions were also announced by Computer Control Division, which completed a new engineering facility at its Framingham, Massachusetts headquarters late in 1967, and was nearing completion of a new building in nearby Marlboro for metal fabrication operations. Expansion of the division's Peterborough, New Hampshire plant is also complete. In total the expansion programs add nearly 150,000 square feet to existing buildings, an increase of about fifty per cent.

Computer center at Computer Control Division's new facility in Framingham, Mass. A Honeywell DDP-516 computer and associated equipment are used to develop and check out software for the division's computer line.





INTERNATIONAL OPERATIONS



"The outlook for our international business in 1968 is mixed, largely due to the unsettled state of international monetary affairs, but we nonetheless expect an improvement in over-all performance."

Edson W. Spencer
Vice President
International Operations

Sales of the company outside of the United States were \$212 million, which was 20 per cent of the company's total business.

The recession in Germany was probably the most significant single factor affecting our international business this year. Although German subsidiary sales were about the same as in 1966, softer prices adversely affected profits. The German recession had an indirect effect in slowing down economic growth in Switzerland, Austria, Belgium and Holland. As a result, the growth of our business in those markets also slowed.

The British economy continued to be sluggish throughout 1967. However, the devaluation of the British pound has not affected Honeywell adversely since precautionary measures had been taken. Since we are a net exporter rather than a net importer in Britain, devaluation should help our British business in 1968.

Several new companies were added to the Honeywell international family during 1967. In Argentina we formed a partnership with Industrias-Bas to establish BAS-Honeywell S.A.C.I. The new company will manufacture and assemble control devices. We acquired full ownership of Honeywell S.A. in Spain by buying the shares held by our former distributor. Honeywell S.A. delivered its first locally manufactured industrial instruments in mid-year.

In the Far East we bought minority interests in a joint venture, Yamatake-Honeywell Company Ltd., Taiwan,

This new building in Mexico City serves as regional headquarters for Honeywell's Latin American operations, as well as the home of our Mexican subsidiary. It was occupied in December of 1967.

and in our distributor, Mechanical and Combustion Engineering Co. Ltd., in Singapore. Branch offices were opened in Bombay, India and Beirut, Lebanon. In December, a wholly-owned subsidiary, Oy Honeywell A.B. was formed in Helsinki, Finland as a result of buying all the shares of our long-time Finnish distributor.

New headquarters buildings were occupied by our subsidiary companies in Germany, Belgium, Mexico and Canada. Our factories added to production space in Canada, Scotland, Germany and Japan. The company now has 1.8 million square feet of manufacturing space outside the United States. In December we announced that a new factory would be built in 1968 at Heppenheim, near Frankfurt, Germany for the manufacture of computers within the Common Market.

International sales of home comfort controls enjoyed modest increases in 1967. Increases in housing starts in the United Kingdom and Canada were offset by a slump in construction of new dwellings in other countries in Western Europe. The outlook for temperature controls internationally continues to be favorable, however, due to the exploitation of gas fields in the North Sea off the coasts of Great Britain and Holland, and also due to the general trend in Europe and Japan toward increased sophistication in home heating, which Honeywell is encouraging through more aggressive advertising, sales promotion and public relations programs. Honeywell Controls Ltd. in Great Britain opened a new temperature controls factory at Bellshill, in west Scotland. Altogether, the company has reserved sixteen acres on the Bellshill Industrial Estate for further expansion. It is estimated that forty-five per cent of our British company's temperature controls production will be exported, mainly to European countries, while fifty-five per cent will go to the home market.

The acceptance of our approach to commercial building automation continues to increase, particularly in the Far East. Japan has lifted the restriction on high-rise buildings, and among the projects to receive the new Honeywell systems will be the Bank of Japan in Tokyo. Building owners in Denmark, Sweden, the Philippines and in New Zealand also have ordered building automation systems from our factories in the United Kingdom, United States and Japan.

INTERNATIONAL OPERATIONS

Throughout Europe and Canada the demand for industrial products decreased during 1967. Demand for instrumentation for metal producing and processing industries particularly suffered. However, expansion continued in the petroleum and petro-chemical industries. Valves manufactured in our German factory were installed in a number of important new plants in West Germany, and CurrentroniK instruments manufactured by Yamatake-Honeywell in Japan were installed in new refineries in Amsterdam, Holland; Gothenberg, Sweden; Antwerp, Belgium; and Wales. A range of new products plus an expanded market make the outlook for industrial instruments very promising for 1968.

The most significant factors influencing the MICRO SWITCH international business this year were increased production at our British and German factories and a sixty per cent increase of export shipments to Japan.

Our computer business outside the United States continues to progress at a rapid rate. Bookings in 1967 were substantially ahead of last year. Business is particularly strong in Australia, Canada and the United Kingdom. In Australia we have made significant penetration in the government market for computers and during the past year have made encouraging progress in the commercial market. In Great Britain, despite the generally low level of business investment, the market for computers continues to grow and our business is significantly ahead of last year. Although our computer sales organization in Germany, France, Italy, Holland, Belgium and Switzerland is new, our level of new orders and market penetration increased over the year before.

During 1967 the EDP Division's Programming Systems Division commenced software development activities in the United Kingdom. Personnel were hired, trained and assigned software development projects. We expect to further expand this activity in 1968.

As a result of an agreement in June of 1966 made with the government of India, ten H-400 computers are currently being installed in India to form the base for a nationwide government computer network. The initial agreement provides Honeywell with the opportunity for future expansion of its activities in a potentially significant market.

In Japan Honeywell-designed computer systems continue to receive increasing market acceptance. Nippon Electric under license from us has significantly expanded manufacturing and marketing activities, and occupies a leading place in the Japanese market.

Nippon Electric includes among its customers the Post

Office Ministry, Nippon Telephone and Telegraph, Yawata Iron and Steel, Japan National Railway, and the Sumitomo Bank of Tokyo.

Also in Japan our fifty per cent-owned affiliate, Yamatake-Honeywell Company Ltd., enjoyed its best year in sales and profits. A significant contribution to our worldwide industrial instrument sales was made by the CurrentroniK line of miniature electronic instruments, designed and manufactured in Japan and sold by Honeywell offices throughout the world.

In the United States, six international regional offices are strategically located in major centers of export business. Among the important jobs these offices helped acquire for the company during 1967 were an oil refinery in Holland and a new fertilizer plant in Iran.

The Aerospace & Defense Divisions are active on a worldwide basis through licenses, exports from the United States and local design development and manufacture by the international subsidiaries in England and Germany. Sales were increased over 1966 through the development of new license agreements, our German company's ordnance capability, and increases in market penetration by several commercial and military avionics products. Further increases resulted from major programs such as production of flight control and fuel quantity systems for the F104 aircraft in Italy, Germany, Japan and Canada, and flight control systems supplied to Sweden for SAAB's Viggen aircraft.

Overseas employment increased by approximately 1,400 persons during the year to a total of 15,000. In keeping with our policy of upgrading our international management, a number of our affiliated companies held management training sessions, and a program of sending top managers to special schools in the United States and Europe was expanded.

In general our international business was satisfactory, considering the mixed economic climate in many countries, plus the start-up costs of our computer operations. The outlook for 1968 also is mixed, largely due to the unsettled state of international monetary affairs, but despite these conditions we look for improved performance in the year ahead.

The new Japanese Hikari Super Express has received world attention for its speed and advanced design. Environmental comfort is maintained by a Yamatake-Honeywell control system.







"As a technology-oriented company, with one out of nine of our employees an engineer or scientist, we are penetrating the frontiers of knowledge to develop the automation systems of tomorrow."

Dr. John N. Dempsey
Vice President
Science and Engineering

The past year was one of significant progress in many areas of science and technology. That one out of nine of our employees is an engineer or scientist indicates the scope of our technical resources.

Important throughout the company is the rapidly developing technology of integrated electronic circuits. We are confident that we are among the leaders in the application of this technology.

To assure continued leadership, our Solid State Electronics Center expanded its activities. The Center has responsibility for advising all engineering groups in the company on the use of solid state devices, including integrated circuits, and for the design and production of specialized and proprietary devices.

In addition to the activities of the center located in Minneapolis, advanced work in integrated circuits is being carried out in two other techniques laboratories—at the Computer Control Division in Framingham, Mass., and the Aerospace Division in St. Petersburg, Fla.

Special forms of integrated circuits that consolidate sensors and their associated electronics into one monolithic structure have been made during the year for several divisions. One of these is an extremely accurate pressure sensor.

Another broad area of interest is the science associated with the relationship between man and machine. It is an area in which we continue to pioneer.

A current program was prompted by the inability of man to keep up with the rate at which data are ac-

Future pilots may keep comfortable with water-cooled temperature control systems. The experimental model shown here is being developed for the Navy by fluidic scientists at Honeywell's Systems and Research Center.

cumulated in a reconnaissance situation. Honeywell engineers are developing means for automatic screening of data to direct the observer's attention to the most likely areas. The system uses a digital computer to look for recognizable attributes in a digitized image.

Interesting future applications lie in medicine—for example, reading X-ray photos or thermographs. Automated inspection in production is another prospective application. In this case the computer compares an image of a manufactured part, as it proceeds past the inspection station, with a standard, and passes it or rejects it, depending upon what it "sees". Not only are man-hours released, but much greater accuracy is obtainable.

Honeywell scientists and engineers are making increased use of computers in problem-solving and equipment design. In some pieces of electronic equipment—a computer, for example—there are hundreds of terminals which must be interconnected with wires. How this is done—the routing of the wires, the sequence of attachment, the proximity of certain wires to other wires—affects the performance and cost of the equipment. From the countless ways in which the job can be done, the computer selects the one which best fits the conditions imposed by the designer.

Circuit designers are placing increased reliance on computer-aided circuit design. Computer analysis of a simulated circuit not only helps the designer evaluate the design factors, but it gives him confidence in the design before he commits it to hardware.

This is particularly necessary in the emerging solid state technology called Large Scale Integration where the components are numerous and their interactions obtainable only by long and tedious calculation.

The computer also comes to the aid of the designer by maintaining an updated status report on the total design of a system or piece of equipment. One aspect of this service is change control. If a change is made in a component, for instance, the computer identifies quickly what other parts are affected, how performance is affected, and notifies all those who must react in some way to the change.

New and improved methods of data storage are the

RESEARCH AND ENGINEERING

subject of continuing research. Processes for plating wires to be used as memory elements were developed and memories have been fabricated successfully using plated wire. We have demonstrated electro-optical techniques that have potential for data storage, recording and display. Character recognition using holographic techniques is being investigated.

For many years we have been interested in the science of combustion. During the past year we extended our research into the adaptation of ultraviolet sensing of flame to a wider variety of combustion conditions. Studies indicate that the electrical properties of flames provide useful information for controlling combustion for maximum safety and efficiency.

The increasingly critical need for cleaner air, both outside and inside, motivated continued research in vapor and gas detectors. Sensors for the smog-forming hydrocarbons from automobile exhaust were refined during the year, and an effective detection method developed for the components of ordinary smoke, both particulate and gaseous.

Recognition of the fact that air taken into a building from the outside is becoming less acceptable has given renewed impetus during 1967 to air cleaning for homes and commercial buildings. New concepts are being investigated.

Advances were made in ultraviolet detection methods during the year. Sensitivity was expanded to cover a wider range of applications. Investigations of solid state UV sensors were initiated. The fast response time of one class of our ultraviolet detectors was demonstrated in a system that senses the beginning of an explosion and reacts fast enough to actuate an extinguisher.

Progress was made during the year toward measurement of liquid flow in a pipe by completely external means. The method used provides a significant advantage in that it produces a succession of electrical pulses as a measure of flow rate. This kind of output can go directly into a digital computer.

A project was launched during 1967 to measure the properties of materials for use in undersea research, particularly those materials that make up sonar equipment. The acoustic properties of the transmitter under the high pressures of deep submergence are of special interest.

The design of sonar transducers is presently limited by insufficient knowledge of the behavior of conventional materials and the obvious inadequacy of some of them.

It has become evident that entirely new materials will have to be made.

The New Products Department was established during 1965 to promote and encourage the development of new products and markets outside of established fields of divisional interest.

The department's vapor and gas detection program has been broadened and given considerable impetus with the increasing general public and governmental concern with air pollution. Work continues with governmental and industrial groups concerned with automobile exhaust emissions and abatement. A program to measure and control pollutants emanating from manufacturing plants and processes has been initiated.

New Products is placing emphasis on the translation into commercial products of the technological capability developed by the Aerospace & Defense Group. An example of this is the development of a line of new non-contact temperature sensors for industrial and scientific use, generated by many years of infrared research for military applications. The first products are being used to measure and control critical temperatures in the production of glass, fibers and plastics.

Another example is the commercial application of fluidics technology originally developed for the government. Although full commercial potential has yet to be realized, test systems have been operating successfully for more than a year and have been applied to the natural gas, chemical processing and other industrial areas.

We have been pioneers in fluidics and continue to maintain a position of leadership in the design and fabrication of both systems and components.

To augment our capabilities we have reached an agreement with Corning Glass Works to jointly develop fluidic control systems for commercial turbine engines. Systems design and engineering will be Honeywell's responsibility, with emphasis on sensing and final control elements. Corning will engineer and fabricate fluidic elements and circuits.

Another major effort undertaken during the year involves coordinating the unique capabilities of several divisions to produce a total operating system. An example is a medical information system which will make more effectual the efforts of doctor, nurse and medical laboratory.

PHOTOGRAPHIC PRODUCTS



"Our consistent growth in the photographic business—new sales records for six consecutive years—supports our decision to perform in the triple role of manufacturer, importer and distributor."

Robert L. Pennock
Vice President
Photographic Products Division

Sales of our Photographic Products Division increased somewhat over the previous year, but the improvement was limited by sluggish consumer buying in the first quarter. Our consistent growth in this business—new sales records for six consecutive years—supports our decision to perform in the triple role of manufacturer, importer and distributor.

In our role as manufacturer we developed the Auto/Strobonar 660 electronic flash, which automatically—in millionths of a second—computes the proper exposure for pictures taken at any distances from two to twenty-three feet. During the past year this product continued to enjoy its exclusive position as the world's only completely automatic unit.

Another measure of our success with electronic flash was a licensing agreement concluded with Rollei-Werke, of Braunschweig, Germany, permitting them to manufacture the Auto/Strobonar 660 and the Strobonar 600 for European sales.

The Rollei line of products (for which we are the exclusive U.S. distributor) scored impressive gains in the United States during 1967. The new Rollei 35, for example, greatly exceeded sales forecasts, and was heavily backordered all through the year.

Toward the end of the year we also began to ship in quantity the new Rolleiflex SL 66, Rollei's first single-lens reflex $2\frac{1}{4} \times 2\frac{1}{4}$ camera. Priced at \$995, this camera is considered one of the finest professional tools ever

Amateur and professional photographers alike have made the Honeywell Auto/Strobonar electronic flash a "best seller." It automatically determines the right amount of light for proper exposure.

developed for serious photographers. The standard twin-lens Rollei models, which have been world famous for forty years, also showed sales increases over 1966.

Our Honeywell Pentax 35mm single-lens reflex cameras—made for us by Asahi Optical Co. of Tokyo—continued to be the pace setters in their field, reaching record sales levels in the fall.

During the year several new, completely automatic Super-Takumar lenses were introduced, adding still more breadth and versatility to the Pentax system—already one of the most complete in the world.

Our other imported Japanese product line, cameras and projectors manufactured by the Elmo Co., Ltd. of Nagoya, continued to make progress. With two excellent cameras, the Filmatic Super 8 and the Tri-Filmatic, and six Dual 8 Projectors we increased sales in top-quality segments of the market.

Another example of our growing stature as innovators in the photographic field was the licensing of a major manufacturer to use our automatic self-focusing feature for slide projectors. This Honeywell-invented system, which was first incorporated into our Model 652 and Rondelle projectors, is also used in our latest model, the Auto/Sharp 642, a decorator-styled unit introduced during the year.



CORPORATE OFFICERS

James H. Binger, *Chairman of the Board*

Stephen F. Keating, *President*

Alfred M. Wilson, *Executive Vice President*

Herbert D. Bissell, *Vice President, Marketing*

Charles L. Davis, *Vice President, Aerospace & Defense Group*

John N. Dempsey, *Vice President, Science and Engineering*

James S. Locke, *Vice President, MICRO SWITCH Division*

Gerry E. Morse, *Vice President, Employee Relations*

Clyde A. Parton, *Vice President, Industrial Products Group*

Edson W. Spencer, *Vice President, International Operations*

Edward C. Vorlander, *Vice President,
Temperature Controls Group*

Russell W. Laxson, *Treasurer*

William J. Ledbetter, *Secretary and General Counsel*

Edward R. Marshall, *Controller*

MARKETING EXECUTIVES

David C. Gerrish, *Vice President, Washington, D.C.*

Fred Kaiser, *Vice President, Southern Area—Atlanta*

G. M. Kingsland, *Vice President, Eastern Area—New York*

John R. Lenox, *Vice President, Western Area—Los Angeles*

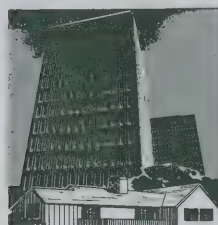
Robert L. Mallory, *Vice President, Southwestern Area—Houston*

J. Thomas Pitts, *Vice President, Midwest Area—Chicago*

Dean B. Randall, *Vice President, Merchandising*

Ray R. West, *Vice President, New Products Department*

PRODUCTS, PRINCIPAL MANUFACTURING



AUTOMATION AND CONTROLS FOR HOMES AND BUILDINGS

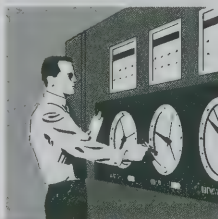
Temperature Controls Group: EDWARD C. VORLANDER, Vice President in charge.

Residential Division: T. A. REED, Vice President and General Manager • K. W. SCHICK, Vice President.

Products for Residences and Small Commercial and Industrial Buildings—Electric and electronic systems and controls for heating, air conditioning, humidity control, and appliances. Special products such as electronic air cleaners, flame safeguard systems. MANUFACTURING PLANTS: Minneapolis, Minnesota • Los Angeles, California.

Commercial Division: S. J. NELSON, Vice President and General Manager • R. W. CRYSLER, Vice President and Sales Manager.

Products for Commercial, Institutional and Industrial Buildings—Pneumatic, electric and electronic control systems for heating, ventilating, refrigeration and air conditioning; clock and program systems; systems for fire detection and alarm, for building security and for centralized automation of building operation. MANUFACTURING PLANTS: Chicago, Illinois • Wabash, Indiana • Akron, Ohio.



CONTROLS FOR INDUSTRY

Industrial Products Group: C. A. PARTON, Vice President in charge.

Industrial Division: C. A. PARTON, Vice President and General Manager • J. T. TEED, Vice President, Marketing.

Apparatus Controls Division: R. L. FILLMORE, Vice President and General Manager.

Instrumentation for Industry — Instruments to automatically indicate, record and control process variables; analog computers; panels; sensors and completely engineered systems to automate industrial processing plants; hydraulic, pneumatic, electric and manual valves. MANUFACTURING PLANTS: Philadelphia (Fort Washington), Pennsylvania • Minneapolis, Minnesota.

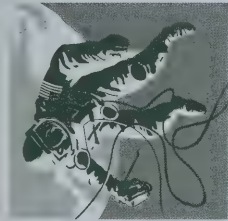
FACILITIES AND MANAGEMENT

Test Instruments Division: CORLES M. PERKINS, Vice President and General Manager.

Instrumentation for Test, Research and Medical Use. Production testing and laboratory equipment including recording, measuring and display instrumentation. Products include Visicorder oscillographs, magnetic tape recorders, X-Y graphic recorders, signal conditioners, data logger systems, digital multimeters, RF surveillance instrumentation, Engineering and Metrology Services. MANUFACTURING PLANTS: Denver, Colorado • San Diego, California • Annapolis, Maryland.

MICRO SWITCH Division: J. S. LOCKE, Vice President and General Manager • F. E. WILSEY, Vice President, Marketing • C. A. ANDERSON, General Manager, Precision Meter.

Switches, Keyboards, Industrial Controls, Meters—Wide line of precision snap switches, mercury switches, proximity switches, lighted pushbuttons, industrial manual controls, keyboard assemblies, and precision electrical meters for commercial, industrial, military and aerospace applications. MANUFACTURING PLANTS: Freeport, Illinois • Warren, Illinois • Manchester, New Hampshire.



AEROSPACE AND DEFENSE

Aerospace & Defense Group: C. L. DAVIS, Vice President in charge • R. J. CONDON, Vice President, Marketing.

Systems & Research Division: V. W. BEARINGER, Vice President and General Manager.

Systems Analysis and Design, Applied Research, and New Product Development for Defense and Aerospace—Integrated weapons systems; reconnaissance and surveillance systems; integrated avionics systems; scientific spacecraft and payloads; electro-optical systems; radar systems; infrared detectors and mappers; radiometers; star trackers; optical correlators; research in life sciences, aerospace sciences, fluidic sciences and ordnance sciences. LABORATORIES: Minneapolis, Minnesota • Boston, Massachusetts.

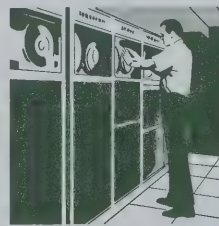
Aerospace Division: W. T. NOLL, Vice President • E. H. OLSON, Vice President and General Manager, Minneapolis • J. W. ANDERSON, Vice President and General Manager, Florida.

Products for Aviation and Space—Systems and compo-

nents for: inertial guidance; flight stabilization and control; tactical avionics; vehicle instrumentation; data processing, communications, and related ground support equipment; satellites; fluidic systems; special precision components such as gyroscopes, accelerometers, navigation and stabilization platforms, north-finders; trainers and simulators; autopilots, instruments for commercial and business aviation. LABORATORIES AND MANUFACTURING PLANTS: Minneapolis, Minnesota • St. Petersburg, Florida.

Ordnance Division: E. C. LUND, Vice President and General Manager • T. F. HUETER, Vice President and General Manager, Marine Systems Center.

Design and production capabilities for Army, Navy, and Air Force weapon systems: Torpedoes; rocket and missile warheads; munitions and munitions dispensers; air- and ship-launched missile systems; mechanical and electronic fuzing and arming systems; armored vehicle fire control systems; intrusion detection systems; active and passive sonar systems; oceanographic systems; event and ranging control systems; simulation and training systems; ordnance test and checkout systems; ground support equipment; ordnance electrical and electronic subsystems; ammonia battery power supplies and associated electronics; inertial, barometric and hydrostatic switches; special cable assemblies; high volume assembly machines; special ceramic and refractory shapes. LABORATORIES AND MANUFACTURING PLANTS: Minneapolis, Minnesota • Seattle, Washington • Los Angeles, California • Montgomeryville, Pennsylvania.



COMPUTER OPERATIONS

Computer Group: JAMES H. BINGER, Group Executive.

Electronic Data Processing Division: C. W. SPANGLE, Vice President and General Manager • J. C. CHU, Vice President, Product Planning and Development • R. P. HENDERSON, Vice President, Marketing • F. G. MILLER, Vice President, Manufacturing • A. L. RUDELL, Vice President, Administration.

Electronic Data Processing Systems—A complete line of data processing systems, terminal equipment and programming support for commercial, industrial, scientific and government use. Principal computer line is the third-generation Series 200 family of nine computers: H-110, H-120, H-125, H-200, H-1200, H-1250, H-2200,

H-4200 and H-8200, ranging in monthly rental from \$2,500 to \$50,000. The division also markets high-speed computer printers; magnetic tape transports; magnetic tape, card and paper tape reading and punching equipment; optical reading devices; mass memory storage units; communications terminals; graphic display units and consumable supplies. Also produced is a full line of programming aids including operating systems, compilers, assembly language programs, special applications packages for specific fields, and utility and scientific routines. **LABORATORIES AND MANUFACTURING PLANTS:** Brighton, Waltham, Lawrence and Lowell, Massachusetts.

Computer Control Division: BENJAMIN KESSEL, Vice President and General Manager • T. P. BOTHWELL, Vice President, Engineering • C. L. ARNOLD, Vice President, Manufacturing • T. W. HELWEG, Vice President, Marketing • R. F. MILLS, Vice President, Administration.

General-Purpose, Scientific and Industrial Control Computer Systems and Components—A line of general-purpose digital computers for scientific, laboratory, real-time, process and industrial control, and OEM markets. Principal products include the DDP line of computers, including DDP-124, DDP-416, DDP-516. Other products include memory test equipment, a line of integrated-circuit logic modules, and high-speed magnetic memory systems. Complete programming aids for scientific, simulation, mathematical and general-purpose computation are also produced. **LABORATORIES AND MANUFACTURING PLANTS:** Framingham, Massachusetts • Peterborough, New Hampshire • Los Angeles, California.

OTHER PRODUCTS

Photographic Products Division: R. L. PENNOCK, Vice President and General Manager.

Photographic Products—Complete line of quality photographic products, including Honeywell Elmo movie cameras and projectors, Honeywell Pentax, Rolleiflex and Rolleicord precision cameras, Strobonar electronic flash equipment, flash guns, slide projectors, color duplicating devices, darkroom equipment. **MANUFACTURING PLANT:** Denver, Colorado.

Tampa Division: M. P. FEDDERS, Vice President.

High Volume, Low Cost Production of Electronic Devices—Communications equipment: modems, vocoders, multiplexers; r.f. transmitter-receivers; data transmitter-receivers. Power equipment: ac to dc power converters (regulated), dc to ac power converters (regulated), power inverters; welded, encapsulated (transfer

molded, potted) modules; soldered, encapsulated (transfer molded, potted) modules; multilayer printed circuit boards; electronic logic assemblies, discrete or integrated. **MANUFACTURING PLANT:** Tampa, Florida.



INTERNATIONAL OPERATIONS

International Operations: E. W. SPENCER, Vice President in charge • L. F. WILLS, President, Honeywell Controls Ltd., Canada • C. B. MEECH, Vice President, Far East • J. P. MCCARDLE, Vice President, Continental European Operations • L. R. PRICE, Managing Director, Honeywell Controls Ltd., United Kingdom • CLAUDE H. SMITH, Vice President, Computer Operations, Europe • J. W. MORRISON, Vice President, Finance, Administration and Latin America • P. W. FELT, Vice President, Engineering and Manufacturing.

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